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Colletotrichum fioriniae comb. & stat. nov., resolving a nomenclatural muddle

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Abstract—The widely used name "*Colletotrichum fioriniae*", published in 2009, is invalid; it is neither a valid new combination for "*Colletotrichum acutatum* var. *fioriniae*" (itself invalid) nor a valid new name, because no Latin diagnosis or description was presented or referenced. With the abolition of "dual nomenclature" (the separate nomenclatures of teleomorphs and anamorphs) under the current International Code of Nomenclature, it is now possible to publish *Colletotrichum fioriniae* as a new combination based on *Glomerella acutata* var. *fioriniae*, the only validly published name for this taxon.

Key words—*Glomerellaceae*, *Glomerella fioriniae*, *Colletotrichum acutatum* group A3, *Colletotrichum acutatum* group C

Introduction

Glomerella acutata var. *fioriniae* was proposed with an accompanying Latin diagnosis by Marcelino et al. (2008), together with an asexual morph, "*Colletotrichum acutatum* var. *fioriniae*". In 2008, the then current International Code of Botanical Nomenclature (ICBN (Vienna); McNeill et al. 2006: Art. 59.1) permitted the simultaneous publication of separate names for the asexual and sexual morphs of a single taxon. However, the lack of a Latin diagnosis or description means that Marcelino et al.'s (2008) *Colletotrichum* name is invalid (McNeill et al. 2012: Art 39.1).

Within *Colletotrichum acutatum* sensu lato, Shivas & Tan (2009) identified a separate clade ("formerly *C. acutatum* group C [of Lardner et al. 1999] or A3 [of Sreenivasaprasad & Talhinhas 2005]"), for which they proposed that the two varietal names of Marcelino et al. (2008) should be raised to species rank as "*C. fioriniae*" (anamorph) and "*G. fioriniae*" (teleomorph). Unfortunately, both of these names are invalid: the proposal of "*Colletotrichum fioriniae*" cites (with a full and direct reference) the invalid name "*C. acutatum* var. *fioriniae*" as its "basionym", and fails to supply the required Latin diagnosis or description; the proposal of "*Glomerella fioriniae*" fails to provide the required full and direct reference to its basionym (McNeill et al. 2012: Art 41.5) and indeed does not clearly indicate the name of its basionym (although in subsequent discussion, *G. acutata* var. *fioriniae* is mentioned in passing).

This leaves *Glomerella acutata* var. *fioriniae* as the only valid name available for the taxon.

The species has been widely treated under the invalid name "*Colletotrichum fioriniae*" in recent taxonomic and phytopathological literature (e.g., Baroncelli et al. 2015; Bragança et al. 2016; Damm et al. 2012; Garibaldi et al. 2016; Hyde et al. 2009; Ivic et al. 2013; Kasson et al. 2014; Kou et al. 2014; Liu et al. 2016; Munda 2014, 2016; Oo et al. 2016; Pszczółkowska et al. 2016; Sun et al. 2012; Zhu et al. 2015). A valid *Colletotrichum* name is an urgent necessity, because *Colletotrichum* 1831, rather than *Glomerella* 1903, has been selected as the preferred holomorphic genus name (Réblová et al. 2016: 135).

This unsatisfactory situation is easily remedied under the current International Code of Nomenclature for algae, fungi, and plants (ICN (Melbourne); McNeill et al. 2012: Art. 59), in which the separation between "anamorph" and "teleomorph" names has been abolished. Here, I propose the name *Colletotrichum fioriniae*, with basionym *Glomerella acutata* var. *fioriniae*.

Taxonomy

Colletotrichum fioriniae (Marcelino & Gouli) Pennycook, **comb. & stat. nov.**

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≡ *Glomerella acutata* var. *fioriniae* Marcelino & Gouli, in Marcelino et al., Mycologia 100: 362. 2008.

Holotype: USA, New York, Westchester, Ward Pound Ridge Reserve, from mummified adult *Fiorinia externa* Ferris (*Insecta*, *Diaspididae*), "liquid-preserved perithecia (90% ethanol) produced by crossing *Colletotrichum acutatum* var. *fiorinia* [sic] strains EHS_{58} × EHS_{58} as well as mature mycelium of strain EHS_{58} in PDA agar cubes", 2005, J. Marcelino & S. Gouli (Worldwide Collection of Entomopathogenic Fungi, Entomology Research Laboratory, University of Vermont, Burlington VT, USA; ex-type culture, CBS 128517 = ARSEF 10222).

"*Colletotrichum acutatum* var. *fioriniae*" Marcelino & Gouli, Mycologia 100: 365. 2008, nom. inval. (no Latin diagnosis or description; ICN (Melbourne) Art. 39.1).

"*Colletotrichum fioriniae*" R.G. Shivas & Y.P. Tan, Fungal Diversity 39: 117. 2009, nom. inval. (no Latin diagnosis or description; ICN (Melbourne) Art. 39.1).

"*Glomerella fioriniae*" R.G. Shivas & Y.P. Tan, Fungal Diversity 39: 117. 2009, nom. inval. (no full and direct reference to basionym; ICN (Melbourne) Art. 41.5).

Discussion

The validation of *Colletotrichum fioriniae* as a comb. & stat. nov. has been preferred because it recognizes the existence of the valid basionym in *Glomerella*. Alternatively, the name could have been validated as a sp. nov., since the varietal name in *Glomerella* does not have priority at specific rank.

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